

LAB 8: STRING (ARRAY OF CHARACTERS)

For each problem below:

- Analyze the problem by identifying input, output, formula, and constraint
- Design an algorithm to solve the problem using pseudocode (so that you could include the pseudocode in your program)
- Prepare several, appropriate number of test data to verify the correctness of your program
- Prepare, compile, link, and execute the program to solve the problem
- Test your program using the prepared test data
- Write proper documentation in the program. Include the following information to form a banner at the beginning of your program:

```

/*****
* Author's: your name and student ID
* Course: the course code only
* Section: your specific section number
* Date: of lab session
* Brief description: of what problem the
*                  program tries to solve
* Pseudocode: write the algorithm to solve the
*              problem
* Test data: provide a set of test data
*            - input & expected output
*****/

```

QUESTIONS

- Write a program that asks for your name and your pet's name. (If you do not have one, make up a name!). It then prints a secret message with both names in it. Example of the message is as shown below:

```

Enter your name: xxxx xxx
Enter your pet's name: yy yyy

xxxx xxx should take yy yyy for a stroll in the park...

```

- Write a program that displays copies of the message "Test of resilience for C students." Format the program's output as follows:

```

The first copy gave "Test of resilience for C students."

The second copy gave "Test of resilience"

The third copy gave "Test of re"

```

3. Write a program that asks for your name, student ID and age. Then form a passcode based on the first 6 letters in your name, your age and the first two letters in your student ID. Next, calculate and display the length of the passcode on the screen. An example of the program's input/output is as shown below:

```
Enter your name: Sharon Stone
Enter your student ID: ME12345
Enter your age: 18

Your passcode is: Sharon18ME
The passcode has 10 characters
```

4. Write a program that asks users for the name on an input file and an output file. Then display an error message if both file names are the same and ask the user to re-enter the name again. An example is shown below:

```
Enter the input file name: lab11.txt
Enter the output file name: lab11.txt
Cannot use the same file name. Please re-enter.

Enter the input file name: lab11_in.txt
Enter the output file name: lab11_out.txt

Excellent!
```

5. Write a complete C program to translate the following flowchart into its equivalent executable codes without changing any of its logic.

